

## CLAIMS

1. A computer trading system for trading fungible instruments, comprising:
- 5 a communication network for transmitting deal related information messages comprising deal related information;
- a plurality of order input devices connected to the network for generating price quotation messages
- 10 comprising orders; and
- a plurality of nodes connected to the network in a distributed arrangement and arranged to distribute deal information messages throughout the network, message distribution between nodes being via
- 15 canonical paths between nodes, where a canonical path is the optimal route between a pair of nodes and wherein:
- i. A canonical path between two given nodes is commutative;
- 20 ii. Where a canonical path between two given nodes includes one or more further nodes, the canonical path between the further nodes and each of the given nodes is the same as the sub-path between the given node and the further
- 25 node that forms part of the canonical path between the given nodes; and
- iii. The canonical path between each node and itself is empty.
- 30 2. A computer trading system according to claim 1, wherein the nodes are arranged as a plurality of cliques, wherein each clique comprises a plurality of logically connected nodes, with each node in a clique being connected to all other nodes in the clique and

any two cliques are connected by a single path,  
whereby the plurality of nodes form a clique tree.

3. A computer trading system according to claim  
5 1, wherein messages transmitted on the network include  
routing information.
4. A computer trading system according to claim 3,  
10 wherein the routing information includes a  
distribution pattern.
5. A computer trading system according to claim 3,  
wherein the routing information includes a node  
15 specified in the message send request.
6. A computer trading system according to claim 3,  
wherein the routing information includes a routing  
flag.
- 20 7. A computer trading system according to claim 4,  
wherein the distribution pattern is a targeted  
pattern in which a message is sent to a specified  
destination node.
- 25 8. A computer trading system according to claim 4,  
wherein the distribution pattern is a broadcast  
pattern in which a message is to be sent to a node in  
the network.
- 30 9. A computer trading system according to claim 4,  
wherein the distribution pattern is a broadcast with  
exclusion in which a message is to be sent to all  
nodes in a network except a given node or set of  
35 nodes.

10. A computer trading system according to claim 7, 8 or 9, wherein the distribution pattern is a complex pattern comprising two or more of said targeted pattern, said broadcast pattern and said broadcast with exclusion pattern.
11. A computer trading system according to claim 6, wherein the routing flags include a bypass flag indicating that message is to be delivered only to its final destination.
12. A computer trading system according to claim 6, wherein the routing flag includes an inspection flag indicating that the message is to be delivered to each node on the path from the message source to the message destination.
13. A computer trading system according to claim 6, wherein the routing flags include an interception flag indicating that the message is to be delivered only to the first node on the path from the source node to the destination.
14. A computer trading system according to claim 1, wherein the deal related information messages includes a SubmitOrder message sent from an order input device to a node, and the deal related information is an indication that a new order is entered into the system.
15. A computer trading system according to claim 14, wherein the deal related information messages includes an OrderAvailable message indicating that a new order has been submitted from an order input device, the OrderAvailable message being received at

a network node to which the submitting order input device is connected and broadcast through the network.

- 5      16. A computer trading system according to claim 15,  
         wherein the deal related information messages  
         includes an OrderCancelled message sent from an order  
         input device to a node, and the deal related  
10          information is an indication that an order is not  
         longer available.
17. A computer trading system according to claim 16,  
         wherein the deal related information messages  
         includes an interrupt order message broadcast through  
15          the network on receipt of an order cancelled message.
18. A computer trading system according to claim 17,  
         wherein the deal related information messages  
         includes a ProposeDeal message sent from a node at  
20          which an order is matched and the deal related  
         information is an indication that a deal between two  
         orders is proposed.
19. A computer trading system according to claim 1,  
25          wherein the deal related information message is a  
         market update message broadcast the matching node and  
         the deal related information is a change in available  
         and information is reserved amounts of an order.
- 30      20. A computer trading system according to claim 18,  
         wherein the deal related information message is a  
         proposed deal fail message sent by a node owning one  
         side of a proposed deal and the deal related  
         information is a rejection or partial rejection of  
35          the deal.

21. A computer trading system according to claim 1,  
wherein the deal related information message is a  
HitNotMatched message sent by a node to whom a hit  
order is submitted and the deal related information  
is an indication that the deal proposed for the hit  
order failed.
22. A computer trading system according to claim 1,  
wherein the deal related information message is a  
ConfirmOrder message sent by a node to an order input  
device and the deal related information is whether an  
order entered from the order input device is still  
valid.
23. A computer trading system according to claim 12,  
wherein the deal related information message is an  
OrderConfirmed message sent from the order input  
device to the node in response to a ConfirmOrder  
message and the deal related information is still  
valid.
24. A computer trading system according to claim 1,  
wherein the deal related information message is a  
deal done message sent from a node confirming a deal  
to a node proposing a deal, and the deal related  
information is that a proposed deal has been done.
25. A computer trading system according to claim 1,  
wherein the deal related information message is a  
list matched message sent from a node proposing a  
deal and the deal related information is that a hit  
order has been matched.

26. A computer trading system according to claim 1,  
wherein the nodes are Broker nodes, each comprising a  
store of orders available for trading in the system,  
and means for distributing prices to at least one  
order input device.

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27. A computer trading system according to claim 26,  
wherein the Broker nodes are arranged as a clique  
tree, wherein each clique comprises a plurality of  
logically connected Broker nodes, and any two of said  
cliques are connected by a single path.

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28. A computer trading system according to claim 27,  
wherein the single path connecting two cliques  
comprises a Broker node common to both cliques.

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29. A computer trading system according to claim 1,  
wherein the fungible instrument is a financial  
instrument.

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30. Anonymous trading system for trading fungible  
instruments comprising:

a communications network for transmitting  
electronic messages;

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a plurality of order input devices connected  
to the communications network each for generating  
electronic price quotation messages including bid  
and/or offer prices and for communication to a trader  
of price quotation messages received from others of  
said plurality of order input devices over the network;

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a plurality of broking nodes connected to the  
network for matching orders input into the system from  
the order input devices, for executing deals where  
orders are matched and for distributing price quotation

messages to the order input devices in response to the price quotation messages and the order matching;

wherein the broking nodes are arranged as a plurality of cliques, wherein each clique comprises a plurality of logically connected broking nodes, with each broking node in a clique being connected to all other broking nodes in the clique and any two cliques are connected by a single path, whereby the plurality of broking nodes form a clique tree.

31. An electronic trading system comprising:

a plurality of broking nodes for matching anonymous bids and offers entered into the system by counterparties and for executing matched bids and offers to complete a deal, the broking nodes being arranged as a plurality of cliques, wherein each clique comprises a plurality of logically connected broking nodes, with each broking node in the clique being connected to all other broking nodes in the clique and any two cliques being connected by a single path whereby the plurality of broking nodes form a clique tree.